Multifunctional Camera System for Video Assisted Thoracic Surgery

Video-assisted thoracic surgery (VATS) is a type of thoracic surgery performed with the assistance of a small video camera that is inserted into the patient's chest. VATS patients enjoy shorter recovery times, reduced post-operative pain and lower complication rates as compared to patients that undergo comparable non-VATS surgeries. However, VATS camera systems have a number of disadvantages stemming from the use of long, rigid camera rods to accommodate the camera. These disadvantages include requiring additional incisions, additional pain and nerve damage resulting from manipulating and inserting the rigid scope, difficulty in manipulating the camera around soft tissues, difficulty in visualizing the relevant structures due to the camera form factor, and requiring a member of the surgical team to manipulate the arm.

Invention
SIU researchers have developed a multifunctional camera system having a bendable arm and camera configured to be inserted into the thoracic cavity of a patient. The camera head has a high definition video camera, light source and a view adjustment mechanism for changing the viewing angle of the camera without changing the position of the camera head. A controller controls the view adjustment mechanism under the command of a surgeon.

Key Advantages
- Bendable arm is adjustable to a set, predetermined position
- HD video camera and light source located at end of the bendable arm
- Allows user to change the viewing angle of the camera without requiring user to change the position of the camera head

Status
U.S. patent application #16/376,551 was filed on April 5, 2019. The technology is available for license.

Other opportunities related to this technology, included but not limited to sponsored and/or collaborative research, may be available. Please reach out to the designated contact identified at left for more information.

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Applications
- Video-assisted thoracic surgery

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